# INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF RECLAMATION

# COMPLIANCE INSPECTION REPORT

Inspection Type: C Operation Type: X Surface Is This Inspection For Last N Mines/Permits with this Units	Date r/Ground Conditions 71° (P, C, PC) [ Processing Month? (Y/N) N	of Last Inspection 03/21/2011 F Sunny; Ground Firm      Exploration Underground
INSPECTION CHECKLIST: Indicasatisfactory. For any items determination. Items marked	marked (X), provide a n	
X 2. Signs and Markers, NA 3. Operations, Coal R NA 4. Backfilling and Gr NA 5. Topsoil, Alternate X 6. Revegetation/Rills X 7. Post-Mining Land U X 8. Hydrologic Balance X 9. Disposal of Coal/N NA 10. Auguring, Processi NA 11. Transportation and NA 12. Casing/Sealing Exp NA 13. Subsidence Control S 14. Liability Insuranc NA 15. Bond Release Infor X 16. Other Permit and S S 17. Off-Site Impacts N	fon-Coal Waste, and Excessing, and Steep Slopes.  Support Facilities - Utwood Underground Opening Prevention.  Expires 11/01/2011 Emation.  Site Conditions: NPDES Edeted (Y/N) N.	Reclamation.  Smland Handling.  Stigation.  SS Spoil.  Sility Install.  SS.
**************************************		*************  Copy Issued To:  Not Issued on Site Peabody Midwest Mining, LLC 7100 Eagle Crest Blvd, Ste 100 Evansville, IN 47715
Signature:  Authorized Regres Division of Recla		Date: April 21, 2011

## COMPLIANCE INSPECTION REPORT

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Permittee <u>Peabody Midwest Mining</u>, <u>LLC</u> Signature of Co. Rep. <u>Not Completed on Site</u> Mine <u>Somerville East Mine</u>
Unit # <u>417</u> County <u>Pike</u>
Date of Insp. April 18, 2011 Time 10:36 AM

#### COMMENTS:

updated.

1. Areas Permitted, Bonded, or Unsuitable

A. The S-354 permit acreage is broken down as follows:

Permitted acreage: 926.9 acres
Bonded Acreage: 443.2 acres
Phase II (grading) retained: 13.7 acres
Phase III (reveg) retained: 38.3
Phase III (final) retained: 443.2

B. The Army Corps of Engineers issued Nationwide Permit (NWP) authorization under 33 CFR 330, No. 21 (404 permit) for the Somerville East operation on May 8, 2006.

- 2. Signs and Markers, Survey Corner Markers.

  The mine ID sign on the north end of former haul road #3 still needs to be
- 6. Revegetation/Rills and Gullies, and Slides.
- 7. Post-Mining Land Use, Fish and Wildlife Mitigation
  - A. The understory is mostly stable with orchard grass, perennial rye, white clover, red clover, partridge pea and annuals in the species mix.
    - 1. Mowing was completed between the rows of trees fall 2010 to reduce competition and mouse/vole cover while increasing litter for soil protection. Also found is sudex grass that was used as green mulch.
    - 2. ORV traffic is causing damage at the former mine management area and where the north end of the access road opens up to the reclaimed acreage. Rill and gully erosion is becoming more noticeable in this area.
  - B. Forest areas are vegetated with a mixture of tree and shrub species including red oaks sp., white oaks sp., hickory, bald cypress, pecan, walnut, ninebark, sycamore, tulip poplar, sweetgum, dogwood, river birch maple, pine, persimmon and others. Establishment and growth is good to very good throughout.
  - C. Wildlife areas are vegetated similarly to the forest areas.
    - 1. Stream reaches have been constructed within the FC #1 landscape. Older streams seem to be developing well with constructed meanders, pools, riffles and other structures valuable in a wildlife land use. Piles of Rip rap remain for additional construction when field conditions allow access. Concrete barriers also remain at the former entrance off SR 61 and near the outfall of Triad's Basin ASB35 if needed for stream construction.
    - 2. The lay of the vegetation in the main stream channel on the east side of SR 61 indicates some recent significant flows have been handled well. Erosion is minimal in part because heavier sediment has dropped out along the way creating smaller riffles that hold back water flow to a more sustained flow. Root balls positioned at stream bends are also doing a good job of minimizing erosion. Several smaller wetlands have formed along the stream path and behind restraining brush piles that are host to all manner of frogs, red wings, raptors, etc. Mud flats with cattails are also becoming established.
    - Larger marshes exist as shallow water bodies with sedges, rushes, willows, cattails, cottonwoods, bald cypress and other wetland species along with some deeper water areas.
    - 4. The eastern affected area is not without erosion problems however. Groundcover on the outslope just east of the easternmost brush pile is spotty allowing erosion to occur. The main stream channel at this same location has a washout around a log used as a drop structure causing bank erosion.

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#### COMMENTS:

- 5. Other erosion needing attention is in the vicinity of the main stream is where water flow has followed tree furrows. Also stream channel erosion is noticeable where the elevation begins to rise to the south. There is room for additional drop structures for additional erosion control. A terrace outfall into the stream has washed out and more rill/gully erosion is found where field drainage enters the stream in the southern reach of this channel.
- 6. The outfall of basin SE-5S does not have a structure by which discharge flows to the stream. Consequently, sheet erosion has become notable.
- 7. A terrace channel approximately midway up the north facing slope is highly eroded. Erosion is also noted off the south corner of basin SE-11S. The slope at the western point just off the south side of the slope below basin SE-8S needs attention for reoccurring erosion. Erosion is also found on the north side of what was basin SE-10S. Field erosion is found south of Triad's basin B-35 and in the terrace channel that connects Triad's discharge to final cut #1. There is a large round bale east of this basin B-35 that locates more erosion.
- 8. Field erosion is found in the field northwest of the final cut. Ground cover is sparse around most of the final cut and on the slope down gradient from the Basin 35 outfall terrace. Bank erosion is found on the north side of the wet land at the SR 61 culvert. Same material on the west side of SR 61 is leaching out what appears to be iron precip. This material needs to be tested and removed as necessary.
- 9. Excavated material at the primary pipe of final cut 1 needs to be graded out.
- 10. Two three gullies have formed on the upper terrace at the southwest end of basin EL-17. One has been mulched before, not so the other. The terrace that wraps around the west/southwest end of basin EL-22 has significant erosion where field drainage enters the terrace.
- 11. A few notable gullies found in the basin SE-12 S watershed need to be repaired, some for a second time.
- 12. Repairs need to be completed as field conditions allow access.
- D. Prime farmland has yet to be planted with a row crop.
- E. Former haul roads 2 and 3 (east of Hwy 61) are damaged and need to be repaired, especially at culvert (3.1) and the inlet side of culvert 2.1. The former haul road #3 on the west side of SR 61 was recently widened and rocked.
- 8. Hydrologic Balance
- 9. Disposal of Coal/Non-Coal Waste, and Excess Spoil
- 16. Other Permit and Site Conditions: NPDES #ING0040206 Water Monitoring
  - A. Drainage is controlled through basins EL-27, EL-28, and NPDES outfalls at basins EL-22, SE-9S (aka Turkey Flight Lake), SE-12S, and EL-17 (phase II). Basins EL-27 and EL-28 are sediment control structures that have been shown to not discharge.
    - 1. Each of the above named sediment ponds have been certified. Also, certifications of Salt Lick Lake, FC-2, FC-1, and basins SE-5S, SE-6S, SE-8S, SE-10S, SE-11S, and SE-13S (not NPDES points) have been submitted and approved.
    - 2. Basin EL-22 is discharging clear water with a pH of 7.5 (Hach). Basin EL-17 is discharging clear water with a pH of 7.5 and an iron content of 2.4 mg/l (Hach). None of the other basins are discharging at the time of this

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#### COMMENTS:

inspection.

- 3. All impoundments are exempted from annual examination reporting requirements of 312 IAC 25-6-20(9)(E).
- B. The immediate outfall into the affected area from the adjacent Triad operation (Basin SB035) and the outfall into FC #1 are stable at this time but should be checked periodically for damage since these have been problem areas in the recent past. The terrace channel between these two structures is highly eroded (see item 7 above).
- C. All NPDES points are in reclamation status (quarterly). Reports for SE-9S, SE-12S, and FC-2 have been received through January 2011. Reports for basins EL-17 and EL-22 have been received through March, 2011. NPDES reports received to date indicate continuing compliance with Federal and State effluent limits.
- D. Two surface water monitoring stations, R-75 and R-66, are monitored quarterly through final bond release for total dissolved solids or specific conductance, total suspended solids, pH, total iron, total manganese, and flow. The DoR has received reports for these stations through January 2011.
- E. Ongoing groundwater monitoring of one well, GMM-1, is conducted quarterly through final bond. Reports have been received through January 2011. Semi-annual ground water reports have been received for well #10 through August 2009. Monitoring is now concluded for this well. GWM-2 was monitored through July 2005 after which it was mined through by the adjoining Triad South Augusta mine (S-353). Restoration of this well is not required and data collection from this well is finished.
- F. Coal fines deposited in basin EL-27 still need to be cleaned out. This will occur when equipment is mobilized for the next round of stream construction.

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